Course guide
220120 - 220120 - Automobile Electronics

Last modified: 19/04/2023

Unit in charge: Terrassa School of Industrial, Aerospace and Audiovisual Engineering
Teaching unit: 710 - EEL - Department of Electronic Engineering.
Degree: BACHELOR'S DEGREE IN INDUSTRIAL TECHNOLOGY ENGINEERING (Syllabus 2010). (Optional subject).
Academic year: 2023
ECTS Credits: 3.0
Languages: English

LECTURER

Coordinating lecturer: DAVID GONZALEZ DIEZ

STUDY LOAD

<table>
<thead>
<tr>
<th>Type</th>
<th>Hours</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Self study</td>
<td>45,0</td>
<td>60.00</td>
</tr>
<tr>
<td>Hours large group</td>
<td>30,0</td>
<td>40.00</td>
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</tbody>
</table>

Total learning time: 75 h
CONTENTS

Module 1: Introduction to Car electronics

Description:
Role of electronics in a modern car.
Description of systems architecture. Modeling tools.

Related activities:
Final exam.

Full-or-part-time: 12h 30m
Theory classes: 5h
Self study: 7h 30m

Module 2: Systems of driving assistance

Description:
This module deals with systems of driving assistance such as Anti Block System (ABS) or Anti Slip System (ASS), covering basic systems description, operation and simulation.

Related activities:
Homework related to Module 2
Final exam.

Full-or-part-time: 25h
Theory classes: 10h
Self study: 15h

Module 3: Systems of engine management

Description:
This module deals with systems of engine management and monitoring, such as Electronic Fuel Injection, covering basic systems description, operation and simulation.

Related activities:
Homework related to Module 3
Final exam.

Full-or-part-time: 25h
Theory classes: 10h
Self study: 15h

Module 4: Communications between systems. Introduction to CAN bus

Description:
This module introduces the CAN bus. Main features and characteristics of CAN bus. Examples of application.

Related activities:
Final exam.

Full-or-part-time: 12h 30m
Theory classes: 5h
Self study: 7h 30m
GRADING SYSTEM

The final grade depends on the following assessment criteria:
- Homework related to Module 2, weight: 25 %
- Homework related to Module 3, weight: 25 %
- Final exam, weight: 50 %

Any student who wishes to improve his grade may try it at the exam planned at the end of the course. The best note is preserved.